

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A storage area network, comprising:
at least one server;
a plurality of storage devices; and
a storage allocator, connected between said at least one server and said plurality of storage devices, said storage allocator including
a read/write storage request parser that receives from said at least one server a read/write storage request and extracts therefrom a host id parameter, a target LUN parameter and a target host bus adapter (HBA) parameter , and
a logical unit (LUN) mapper that includes a plurality of LUN maps each of which is specific to one of a plurality of hosts, respectively, the LUN mapper being operable to that receive[s] from said read/write storage request parser the host id parameter, target LUN parameter and target HBA parameter and to use said host id parameter to select one from among the plurality of LUN maps corresponding to said host id parameter and then to map[s] based thereon to at least one physical LUN, wherein said at least one physical LUN represents at least one storage location within said plurality of storage devices.
2. (Canceled)
3. (Canceled)
4. (Canceled)

5. (Currently Amended) The network of claim 1 4, wherein said LUN mapper applies said target LUN parameter and said target HBA parameter to said selected LUN map to locate said at least one physical LUN stored in said selected LUN map.

6. (Original) The network of claim 5, wherein said LUN mapper issues said received read/write storage request to at least one storage device corresponding to said at least one physical LUN, wherein said at least one storage device is located in said plurality of storage devices.

7. (Original) The network of claim 5, wherein said selected LUN map comprises a two-dimensional array of physical LUN data, wherein a first axis of said LUN map is indexed by target LUN information and a second axis of said LUN map is indexed by target HBA information.

8. (Currently Amended) A method for allocating storage in a storage area network, comprising the steps of:

providing a plurality of LUN maps each of which is specific to one of a plurality of hosts, respectively;

receiving a read/write storage request from a host computer;

extracting a host id parameter, a target LUN parameter and a target host bus adapter (HBA) parameter from the read/write storage request;

selecting one from among the plurality of LUN maps based upon the host id parameter;

determining a physical LUN based upon the selected LUN map host-id parameter, the target LUN parameter and the target HBA adapter; and

issuing a read/write storage request to a storage device in a storage area network, wherein the storage device corresponds to the determined physical LUN.

9. (Canceled)

10. (Canceled)

11. (Currently Amended) The method of claim ~~8~~ 10, wherein said determining step comprises the step[s] of:

~~selecting one of said stored at least one LUN map corresponding to said host id parameter; and~~

applying said extracted parameters of target LUN and target HBA to said selected LUN map to determine the physical LUN.

12. (Original) The method of claim 11, wherein said selected LUN map comprises a two-dimensional array of physical LUN data, where said applying step comprises the steps of:

applying said extracted target LUN parameter to a first axis of said selected LUN map;

applying said extracted target HBA parameter to a second axis of said selected LUN map; and

locating the physical LUN in said selected LUN map at the intersection of said applied extracted target LUN and said applied extracted target HBA parameters.

13. (Currently Amended) A system for allocating storage resources in a storage area network, comprising:

a memory to store a plurality of LUN maps each of which is specific to one of a plurality of hosts, respectively;

means for receiving a read/write storage request from a host computer;

means for extracting a host id parameter, a target LUN parameter and a target host bus adapter (HBA) parameter from the read/write storage request;

means for selecting one from among the plurality of LUN maps based upon the host id parameter;

means for determining a physical LUN from the selected LUN maps ~~host id parameter~~, the target LUN parameter and the target HBA parameter; and

means for issuing a read/write storage request to a storage device in a storage area network, wherein the storage device corresponds to the determined physical LUN.

14. (Canceled)

15. (Canceled)

16. (Currently Amended) The system of claim 13 ~~15~~, wherein said determining means comprises:

~~means for selecting one of said stored at least one LUN map corresponding to said host id parameter; and~~

means for applying said extracted parameters of target LUN and target HBA to said selected LUN map to determine the physical LUN.

17. (Original) The system of claim 16, wherein said selected LUN map comprises a two-dimensional array of physical LUN data, where said applying means comprises:

means for applying said extracted target LUN parameter to a first axis of said selected LUN map;

means for applying said extracted target HBA parameter to a second axis of said selected LUN map; and

means for locating the physical LUN in said selected LUN map at the intersection of said applied extracted target LUN and said applied extracted target HBA parameters.

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